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Example human health criteria calculations for arsenic, 2,3,7,8-TCDD (dioxin), and thallium based on toxicity values used for current EPA CWA 304(a) recommendations and EPA's 2015 human health criteria recommendations

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		Toxicity and exposure-related inputs consistent with EPA CWA 304(a) recommendations				Tribe-specific inputs per EPA 2015 HHC recommendations				HHC	
Pollutant		CSF (mg/kg-day)-1	RfD (mg/kg-day)	BCF (L/kg)	RSC (fraction)	CRL	BW (kg)	DWI (L/day)	FCR (kg/day)	OO (ug/L)	W+O (ug/L)
Arsenic	carcinogen	1.5	--	44	--	1E-06	80	2.4	0.175	0.0069	0.0053
2,3,7,8-TCDD (dioxin)	carcinogen	156000	--	5000	--	1E-06	80	2.4	0.175	5.9E-10	5.8E-10
Thallium	non-carcinogen	--	0.000068	116	0.2	--	80	2.4	0.175	0.054	0.048

The CSF for 2,3,7,8-TCDD (dioxin) and the RfD for thallium are no longer included in the IRIS database. The CSF for arsenic is being updated in IRIS.

Term	Description	Equations:
HHC	Human health criteria	Carcinogen
CSF	Cancer Slope Factor (carcinogens)	OO (CRL*BW*1000)/(CSF*FCR*BCF)
RfD	Reference Dose (non-carcinogens)	W+O (CRL*BW*1000)/(CSF*(DWI+(FCR*BCF)))
BCF	Bioconcentration Factor	Non-carcinogen
RSC	Relative Source Contribution (non-carcinogens)	OO (RfD*RSC*BW*1000)/(FCR*BCF)
CRL	Cancer Risk Level (carcinogens)	W+O (RfD*RSC*BW*1000)/[DWI+(FCR*BCF)]
BW	Body Weight	
DWI	Drinking Water Intake	
FCR	Fish Consumption Rate	
OO	HHC for consumption of organisms only	
W+O	HHC for consumption of water plus organisms	
--	Term is not applicable	